

TD is over this patent.

☐ **Generate Collection** **Print**

L9: Entry 1 of 1

File: USPT

Dec 18, 2001

US-PAT-NO: 6331304

DOCUMENT-IDENTIFIER: US 6331304 B1

TITLE: Macrophage-infecting parasites expressing a granulocyte macrophage colony stimulating factor

DATE-ISSUED: December 18, 2001

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|-----------------------|--------|-------|----------|---------|
| Papadopoulou; Barbara | Quebec | | | CA |
| Ouellette; Marc | Quebec | | | CA |
| Olivier; Martin | Quebec | | | CA |

US-CL-CURRENT: 424/269.1; 424/85.1, 435/258.3

CLAIMS:

What we claim is:

1. An immunogenic composition, comprising:

an attenuated form of a macrophage infecting parasite which is a strain of Leishmania and which is transformed by a plasmid containing a granulocyte macrophage stimulating factor (GM-CSF) gene and which parasite expresses GM-CSF.

2. The immunogenic composition of claim 1 wherein said parasite is a strain of Leishmania and said composition is formulated as a vaccine for in vivo administration to a host to elicit an immune response against disease caused by a virulent strain of Leishmania.

3. The immunogenic composition of claim 2 wherein the virulent strain is selected from the group consisting of Leishmania donovani, Leishmania braziliensis, Leishmania tarentolae, Leishmania major, Leishmania mexicana, Leishmania tropica and Leishmania aethiopica.

4. The immunogenic composition of claim 2 wherein the host is a primate.

5. The immunogenic composition of claim 2 wherein the host is a human.

6. A method of generating an immune response in a host comprising administering thereto an immunoeffective amount of the immunogenic composition of claim 1.

7. The composition of claim 1 wherein said strain of Leishmania is selected from the group consisting of Leishmania donovani and Leishmania major and said plasmid is selected from the group consisting of pneo-mGM CSF and pneo-hGM CSF.